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ABSTRACT OF THE DISCLOSURE

Remote monitoring of superconducting magnet systems of various types, manufacturers, vintages, and so forth, via a magnet selector interface providing for configuring the monitoring system to the particular magnet system of interest. The technique provides for scalable analogue to digital conversion with integrated excitation circuitry for the input and output of magnet system sensors. Devices, such as remote terminal units and other data-logging technology may be adapted to remotely monitor primary indicators and secondary indicators of magnet system performance and related boil-off of helium. The technique provides earlier warning of impending failures in the magnet system, and thus facilitates predictive maintenance, reduces maintenance costs, reduces MRI downtime, reduces helium loss, and the like.